



UNITED STATES PATENT AND TRADEMARK OFFICE

UNITED STATES DEPARTMENT OF COMMERCE
United States Patent and Trademark Office
Address: COMMISSIONER FOR PATENTS
P.O. Box 1450
Alexandria, Virginia 22313-1450
www.uspto.gov

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/691,634	10/24/2003	Leif Andersson	244337US6	3448
22850	7590	11/20/2007		
OBLON, SPIVAK, MCCLELLAND MAIER & NEUSTADT, P.C. 1940 DUKE STREET ALEXANDRIA, VA 22314			EXAMINER LAUX, JESSICA L	
			ART UNIT 3635	PAPER NUMBER
			NOTIFICATION DATE 11/20/2007	DELIVERY MODE ELECTRONIC

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Notice of the Office communication was sent electronically on above-indicated "Notification Date" to the following e-mail address(es):

patentdocket@oblon.com
oblonpat@oblon.com
jgardner@oblon.com

Office Action Summary	Application No. 10/691,634	Applicant(s) ANDERSSON ET AL.	
	Examiner Jessica Laux	Art Unit 3635	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 23 August 2007.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-6,8-24 and 26-43 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-6,8-24 and 26-43 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 24 December 2003 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. _____.
 3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|--|---|
| 1) <input type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | 5) <input type="checkbox"/> Notice of Informal Patent Application |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08)
Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____ |

DETAILED ACTION

Response to Arguments

Applicant's arguments filed 08/23/2007 have been fully considered but they are not persuasive.

Examiner disagrees with applicant's arguments. First it is noted that the disclosure of Van Hees (English translation page 3, line 8) states that the floating floor is "usually" made of cement, which certainly does not imply is always made of cement therefore Van Hees does not teach away from using the mat for installations where a wood floor is used. Further it is noted that the mere fact that the mat of Van Hees has a waterproof layer also does not teach away from use with a wood floor. The fact that the mat of Van Hees has such a layer merely makes suitable for various installation situations with a variety of flooring material options. Also it is noted that water may end up on a flooring surface no matter what the material depending on the location of the floor surface and that the water proof layer would protect against water seepage through a floor surface placed above the mat, as one of ordinary skill in the art would recognize. These features certainly do not teach away from using the mat with a wood floor installation.

In regards to the argument about specific sound produced with the different materials, examiner notes that it was never stated that the sounds were the same, but rather similar. Applicant states that wood floors produce a "drum sound", but examiner notes that the type of sound produced does not only depend on the type of material (wood or cement) but also on the specific object making contact with the floor (i.e. a

basketball does not make the same "drum sound" as a high heel shoe when contacting the floor), there are many factors that determine the type of sound produced on any floor and applicant has not convincingly explained or disclosed that the sound produced on applicant's claimed wood floor is so very different from that on a cement slab (especially when both materials are designed as finish flooring in a residential building). Therefore examiner maintains the position that a noise produced on the claimed wood floor and that produced on the cement slab would be similar enough to constitute an obvious substitution of flooring materials used with the glass mat.

In regards to the argument about attenuation of noise within the room that the noise is created, examiner notes that the applicant's mat and the mat of Van Hees are both sound attenuating mats. This means that the mat absorbs sound waves thereby reducing the noise produced from contact with the floor. The fact that some of the sound waves are absorbed by the means results in less sound waves that may heard regardless of where a hearer is positioned (i.e. in a room below the floor or the same room as the noise is created). Therefore, examiner maintains the position that "it is inherent that the mat would attenuate the sound created in the room" whether or not the mat was designed or used for such a purpose. Further it is noted that applicant has not sufficiently explained how the instantly claimed mat is designed in such a way that it attenuates sound in the same room as the noise was created while the mat of Van Hees is not capable of such a claim. The argument by applicant that the sound produced by contact with a wood floor needs a specific type of material for attenuation does not sufficiently explain how applicant's mat is structurally or materially "specific" from the

mat of Van Hees. Therefore this argument is not persuasive to overcome the statement of the Office Action stating "the mat of Van Hees is structurally and functionally equivalent to the claimed mat".

Claim Rejections - 35 USC § 103

The text of those sections of Title 35, U.S. Code not included in this action can be found in a prior Office action.

Claims 1-6, 8-9, 12-14, 16-24, 26-27, 30-43 are rejected under 35 U.S.C. 103(a) as being unpatentable over Van Hees (EP 1130190) either alone or also in view of Kajander et al. (6723670).

In regards to claims 1, 34: Van Hees teaches an assembly comprising a floor directly above and in contact with (where the waterproof layer is part of the material comprising a felt of mineral fibers) a material comprising a felt of mineral fibers, the material comprising a felt of mineral fibers configured to attenuate a noise of an impact with a wood floor emitted in a same room as the wood floor (see response to arguments above).

Van Hees does not expressly disclose that the floor structure is a wood floor, however, it is disclosed that the sound insulating substrate is for use with floating slabs or screed, for example, but not limited to floors made of concrete. It would have been well within the general knowledge of one of ordinary skill in the art to use the sound attenuating fiber mat of Van Hees with a floating wood floor as a floating wood floor is a common flooring substance used as an alternative to a concrete floor in many buildings both commercial and residential. Additionally the sound created from impact with a

concrete floor and wood floor would be similar as they are both a hard flooring surface. Therefore it would have been a matter of design choice to a person of ordinary skill in the art to use the mat of Van Hees with a wood floor as claimed as they are functionally equivalent and the floor of Van Hees would perform the same as the floor of applicant's claimed invention.

While Van Hees discloses a fiber mat there is no express disclosure regarding the amount by weight of binder, however examiner takes official notice that is well known in the art of fiber mats for sound attenuation, to have a binder amount by weight of 3-30% (reference US patent to Kajander, 6723670, which disclose a glass fiber mat having a 20+/-3 percent by weight of binder; Col. 6, line 64). Additionally examiner notes that the range of 3-30% is a broad range and therefore not a critical design feature and that any percentage by weight of binder would perform equally well.

In regards to claims 2-3 and 35-36: Van Hees in view of Kajander does not disclose expressly that the thickness is 2-10 or 3-7 mm. Instead Van Hees indicates that the thickness is 5-10 mm (page 5, lines 13-14). At the time the invention was made, it would have been an obvious matter of design choice to a person of ordinary skill in the art to have the thickness range from 5-10 mm because applicant has not disclosed that such a thickness provides an advantage, is used for a particular purpose, or solves a stated problem. One of ordinary skill in the art, furthermore, would have expected the thickness of Van Hees in view of Kajander, and applicant's invention, to perform equally well with either the thickness taught by Van Hees or the claimed 2-10 or 3-7 mm thickness because both dimensions would perform the same function.

Therefore, it would have been prima facie obvious to modify Van Hees in view of Kajander to obtain the invention as specified in claims 2-3 because such a modification would have been considered a mere design consideration which fails to patentably distinguish over the prior art of Van Hees in view of Kajander.

In regards to claims 4-5 and 37-38: Van Hees in view of Kajander teaches the assembly of claim 1 above, where the mat has glass fibers but is silent as to the fineness of the glass fibers. It is inherent that the glass fibers have a fineness index; however Van Hees in view of Kajander does not disclose such. The applicant does not teach criticality as to the specific fineness index being claimed, further applicant provides several ranges that are acceptable. Moreover, it appears that the mat of Van Hees in view of Kajander, or applicant invention, would perform equally well with the glass fiber having a fineness index of any range. Accordingly, it would have been prima facie obvious to one of ordinary skill in the art at the time the invention was made to have modified Van Hees in view of Kajander such that the fineness index ranged 3-25 L/ min as in claim 4 and 10-15 L/ min as in claim 5 because such a modification would have been considered a mere design consideration which fails to patentably distinguish over Van Hees in view of Kajander.

In regards to claims 6 and 39: The assembly as in claim 1 above wherein the mineral fibers are glass fibers (EP 1130190 – Page 3, lines 29-31).

In regards to claim 8: The assembly of claim 1 above, wherein the binder is in an amount from 5-25% by weight (Kajander – Col. 6, line 64).

In regards to claim 9: Van Hees in view of Kajander does not disclose expressly that the binder is in an amount from 6-16% by weight. Instead, Kajander indicates that it is in an amount from 17-23% by weight (Col. 6, line 64). At the time the invention was made, it would have been an obvious matter of design choice to a person of ordinary skill in the art to have the amount by weight of Kajander because applicant has not disclosed that 6-16% provides an advantage, is used for a particular purpose, or solves a stated problem. One of ordinary skill in the art, furthermore, would have expected the Van Hees in view of Kajander and applicants invention to perform equally well with either amount by weight taught by Van Hees in view of Kajander or the claimed amount because both would perform the same function equally well. Further applicant discloses (page 5, lines 20-23) that 20+/-3% to be acceptable. Therefore it would have been prima facie obvious to modify Van Hees in view of Kajander to obtain the invention as specified in claim 9 because such a modification would have been considered a mere design consideration which fails to patentably distinguish over the prior art of Van Hees in view of Kajander.

In regards to claims 12 and 42: The assembly as in claim 1 above, wherein the fibers were produced by the internal centrifugation process. It should be noted that claim 12 is considered a product-by-process claim. The patentability of the product does not depend on its method of production. Determination of patentability is based on the product itself. See MPEP 2113. If the product-by-process claim is the same as or obvious from a product of the same prior art, the claim is unpatentable even though the prior product was made by a different process. *In re Thorpe*, 777 F.2d 695, 698, 227

USPQ 964, 966 (Fed.Cir.1985). Since there are fibers in Van Hees in view of Kajander the claimed limitations are considered to be met.

In regards to claims 13 and 43: The assembly as claimed in claim 1 above, wherein the material includes at least one veil (EP 1130190, element 3).

In regards to claim 14: The assembly as claimed in claim 13 above, wherein the at least one veil is on an external face of the assembly (EP 1130190, Figure 1).

In regards to claims 15: Van Hees in view of Kajander teaches the assembly as claimed in claim 13 above, but does not teach the mass per unit area of the veil ranging from 5-100 g/m². Applicant has not disclosed that having the mass per unit area ranging from 5-100g/m² solves any stated problem or is for any particular purpose. Moreover, it appears that the mat of Van Hees in view of Kajander or applicants invention, would perform equally well with the mass per unit area of the veil with any range. Accordingly, it would have been prima facie obvious to one of ordinary skill in the art at the time the invention was made to have modified Van Hees in view of Kajander such that the mass per unit area of the veil ranged from 5-11g/m² because such a modification would have been considered a mere design consideration which fails to patentably distinguish over Van Hees in view of Kajander.

In regards to claim 16: Van Hees in view of Kajander teaches the assembly as in claim 13 above, Van Hees in view of Kajander does not disclose that the veil is made of polyester, but does disclose that the veil is made of polyolefins (or polypropylene as is sometimes called, www.fabriclink.com/Polyolefin.html). Applicant discloses on page 8 lines 10-13 that the veil can be optionally made of polyester or polypropylene.

Therefore applicant has not provided criticality or stated that having the veil made of polyester solved a stated problem or is for a particular purpose, further applicant has stated polyester to be equal to polypropylene as a material choice. As such the use of polyester is considered a mere design choice that fails to patentably distinguish over the prior art of Van Hees in view of Kajander because one of ordinary skill in the art would have expected the polyester veil and the polypropylene veil to perform the same, as applicant has disclosed, and therefore it is prima facie obvious to modify Van Hees in view of Kajander to obtain the invention as specified in claim 16.

In regards to claim 17: The assembly of claim 1 above, wherein the material and wood floor are adhesively bonded to each other. Kajander teaches having laminates such as wood products adhered to a fibrous mat (Col. 2, lines 60-61).

In regards to claim 18: Van Hees in view of Kajander teaches the assembly of claim 1 above, but is silent as to the wood floor being a laminate. Examiner takes official notice that it is common and known in the art to have a wood floor be a laminate, therefore it would be prima facie obvious to modify the floor of Van Hees in view of Kajander to be a laminate because such a modification would have been considered a mere design consideration which fails to patentably distinguish over the prior art of Van Hees in view of Kajander.

In regards to claim 19: Van Hees in view of Kajander teaches the assembly of claim 1 wherein the assembly is in a building (EP 1130190 – page 1 lines 6-11).

In regards to claims 20 and 22 and 26: Van Hees in view of Kajander disclose a felt comprising mineral fibers configured to attenuate a noise of an impact with a wood floor emitted in a same room as the wood floor (see response to arguments above).

Van Hees in view of Kajander does not disclose expressly that the thickness is 2-10 or 3-7 mm. Instead Van Hees indicates that the thickness is 5-10 mm (page 5, lines 13-14). At the time the invention was made, it would have been an obvious matter of design choice to a person of ordinary skill in the art to have the thickness range from 5-10 mm because applicant has not disclosed that such a thickness provides an advantage, is used for a particular purpose, or solves a stated problem. One of ordinary skill in the art, furthermore, would have expected the thickness of Van Hees in view of Kajander, and applicant's invention, to perform equally well with either the thickness taught by Van Hees or the claimed 2-10 or 3-7 mm thickness because both dimensions would perform the same function. Therefore, it would have been prima facie obvious to modify Van Hees in view of Kajander to obtain the invention as specified in claims 2-3 because such a modification would have been considered a mere design consideration which fails to patentably distinguish over the prior art of Van Hees in view of Kajander.

Van Hees in view of Kajander discloses a mass per unit area of at least 130 g/m² (Van Hees – page 5, lines 16-18); and a binder content of 17-23% (Kajander – Col. 6, line 64) which falls in the range of 3-30% and 5-25% by weight.

In regards to claim 21: The felt as in claim 20 above, wherein Van Hees in view of Kajander teaches a mass per unit area between 350 and 500 g/m², which falls in the range of 180-700 g/m².

In regards to claims 23 and 24: Van Hees in view of Kajander teaches the assembly of claim 1 above, where the mat has glass fibers but is silent as to the fineness of the glass fibers. It is inherent that the glass fibers, have a fineness index, however Van Hees in view of Kajander does not disclose such. The applicant does not teach criticality as to the specific fineness index being claimed, further applicant provides several ranges that are acceptable. Moreover, it appears that the mat of Van Hees in view of Kajander, or applicant invention, would perform equally well with the glass fiber having a fineness index of any range. Accordingly, it would have been prima facie obvious to one of ordinary skill in the art at the time the invention was made to have modified Van Hees in view of Kajander such that the fineness index ranged 3-25 L/ min as in claim 23 and 10-15 L/ min as in claim 24 because such a modification would have been considered a mere design consideration which fails to patentably distinguish over Van Hees in view of Kajander.

In regards to claim 27: The assembly as claimed in claim 26 above, Van Hees in view of Kajander does not disclose expressly that the binder is in an amount from 6-16% by weight. Instead, Kajander indicates that it is in an amount from 17-23% by weight (Col. 6, line 64). At the time the invention was made, it would have been an obvious matter of design choice to a person of ordinary skill in the art to have the amount by weight of Kajander because applicant has not disclosed that 6-16% provides

an advantage, is used for a particular purpose, or solves a stated problem. One of ordinary skill in the art, furthermore, would have expected the Van Hees in view of Kajander and applicants invention to perform equally well with either amount by weight taught by Van Hees in view of Kajander or the claimed amount because both would perform the same function equally well. Further applicant discloses (page 5, lines 20-23) that 20+/-3% to be acceptable. Therefore it would have been prima facie obvious to modify Van Hees in view of Kajander to obtain the invention as specified in claim 9 because such a modification would have been considered a mere design consideration which fails to patentably distinguish over the prior art of Van Hees in view of Kajander.

In regards to claim 30: The assembly as in claim 20 above, wherein the fibers were produced by the internal centrifugation process. This is a product by process and as such is not given much weight in an article claim. Since there are fibers in Van Hees in view of Kajander the claimed limitations are considered to be met.

In regards to claim 31: The felt as claimed in claim 20 wherein the mineral fibers are glass fibers (EP 1130190 – page 1, lines 1-3).

Claims 10-11 and 28-29 and 40 are rejected under 35 U.S.C. 103(a) as being unpatentable over Van Hees in view of Kajander and further in view of Finley (578363).

In regards to claims 10, 28 and 40: Van Hees in view of Kajander teaches the assembly as in claims 1 and 20 and 34 above, but is silent as to the type of binder used. Finley teaches an underlayment for floor that has sound attenuating properties, and further teaches the use of a binder used to hold the glass mat together (Col. 3, lines 51-

54), where the binder is urea-formaldehyde, which is a thermosetting binder as defined by www.thefreedictionary.com/urea-formaldehyde+resin which states: a clear thermosetting resin made from urea and formaldehyde and used in adhesives. It would have been obvious to one of ordinary skill in the art at the time the invention was made to modify the mat of Van Hees in view of Kajander to use urea-formaldehyde as taught by Finley as Van Hees in view of Kajander is silent as to the type of binder used and Finley teaches a binder that will hold together the glass fibers of a glass mat.

In regards to claims 11 and 29 and 41: Van Hees in view of Kajander teaches the assembly as in claims 1, 20, 43 above, but is silent as to the type of binder used. Finley teaches an underlayment for floor that has sound attenuating properties, and further teaches the use of a binder used to hold the glass mat together (Col. 3, lines 51-54), where the binder is an acrylic binder. It would have been obvious to one of ordinary skill in the art to modify the glass mat of Van Hees in view of Kajander to have a binder of acrylic as such a modification would create a glass mat that is a strong soft crease-resistant fabric and since acrylic is used as a substitute for glass making it a good binder for a glass mat.

Claims 32 –33 are rejected under 35 U.S.C. 103(a) as being unpatentable over Van Hees (EP 1130190).

In regards to claim 32: Van Hees discloses a method of using a material including a felt of mineral fibers comprising placing said material on a floor base and directly under and in contact with a floor (page 1, lines 30-32; where the waterproof layer is part of the material comprising a felt of mineral fibers) in a room in order to

attenuate the impact noise created in the room caused by an impact with said wood (where it is inherent that the mat would attenuate the sound created in the room, as the mat is placed under the flooring for the purpose of sound attenuation, and the noise is created as the floor is walked on, and the mat of Van Hees is structurally and functionally equivalent to the claimed mat). Where the mat of Van Hees is used to improve sound insulation (page 1, lines 13-14).

Van Hees does not expressly disclose that the floor structure is a wood floor, however, it is disclosed that the sound insulating substrate is for use with floating slabs or screed, for example, but not limited to floors made of concrete. It would have been well within the general knowledge of one of ordinary skill in the art to use the sound attenuating fiber mat of Van Hees with a floating wood floor as a floating wood floor is a common flooring substance used as an alternative to a concrete floor in many buildings both commercial and residential. Additionally the sound created from impact with a concrete floor and wood floor would be similar as they are both a hard flooring surface. Therefore it would have been a matter of design choice to a person of ordinary skill in the art to use the mat of Van Hees with a wood floor as claimed as they are functionally equivalent and the floor of Van Hees would perform the same

In regards to claim 33: The method as claimed in claim 32 further comprising: placing the material un-bonded onto the floor base (page 11, paragraph 1).

Conclusion

THIS ACTION IS MADE FINAL. Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the mailing date of this final action.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Jessica Laux whose telephone number is 571-272-8228. The examiner can normally be reached on Monday thru Friday, 6:30am to 2:30pm (est).

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Richard Chilcot can be reached on 571-272-6777. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Application/Control Number:
10/691,634
Art Unit: 3635

Page 16

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.



/J. CHAPMAN/
PRIMARY EXAMINER

JL
11/10/2007